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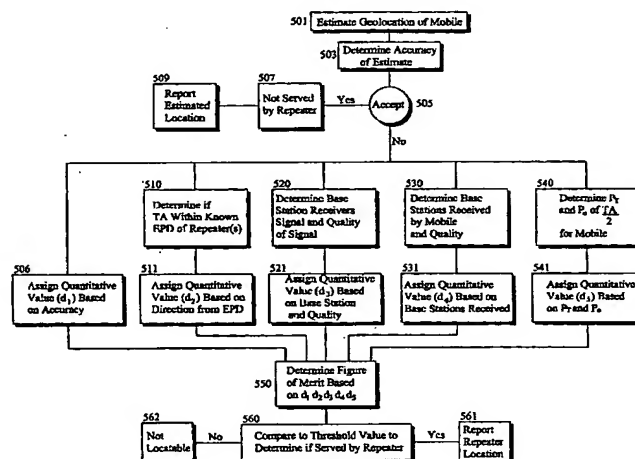
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(54) Title: **SYSTEM AND METHOD OF OPERATION FOR NETWORK OVERLAY GEOLOCATION SYSTEM WITH REPEATERS**



(57) Abstract: A novel system and method for a network overlay geolocation system operating in a host wireless communication system with repeaters is disclosed. Embodiments of the novel system and method enable wireless communication system to determine if signals being received by system receivers arrive directly from a target mobile appliance or if the signals are passing through a repeater. The system's determination may be based at least in part on the TA of the signal, the power of the received signal, the power of the transmitted signal, the hearability of the signal at system receivers, the hearability of system transmitters at the mobile and the known delays associated with the repeaters. Embodiments of the novel system and method provide a more accurate geolocation of mobiles served by repeater stations than capable in the prior art.

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